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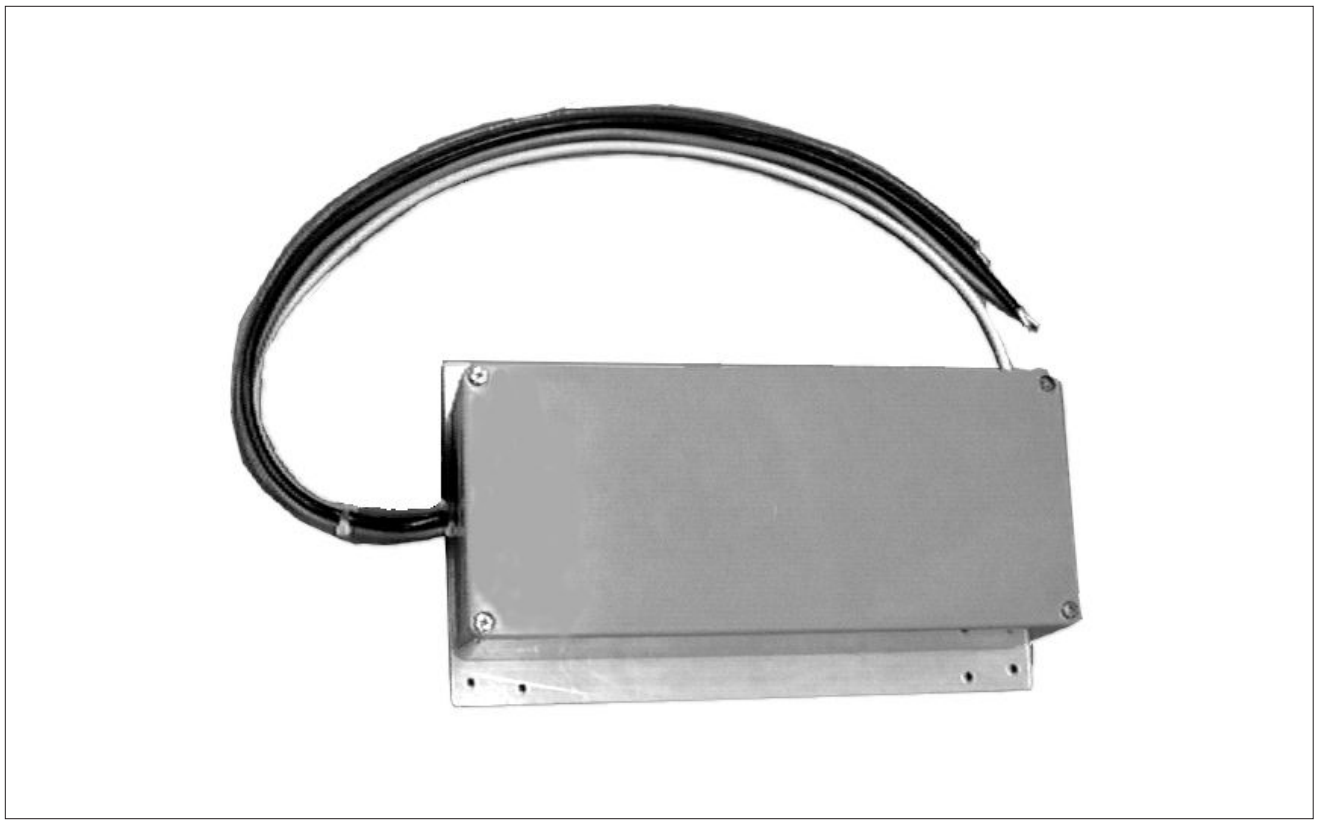
Surge Arrester WN

9890 000 0274x
Techn. No. 4512 104 7114x

Level 0 Documentation



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SERVICE MANUAL - Unit

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Surge Arrester WN

Type no: 9890 000 0274x Techn. No. 4512 104 7114x

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Z-2	07.0	A4	Surge Arrester WN
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SURGE ARRESTER WN

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DRAWINGS

Dimensions Z-1
Installation sample for OPTIMUS RAD/RF, C, CXA Z-2
Installation sample for Velara Z-3

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1 INTRODUCTION AND TECHNICAL DATA

1.1 PRODUCT INFORMATION

The surge arrester protects the electronic circuits of the generator against worst–case power line surges as defined by ANSI / IEEE C62.41 and reduces low–frequency harmonics created by the generator.

The surge arrester must be installed in the mains feeder of the generator if the hospital mains is not conform with the surge protection according to IEC 6061-1-2 (< 2kV line to earth and < 1kV line to line).

For data of impedance see 1.5.

As a device equipped with passive components the surge arrester cannot be destroyed.

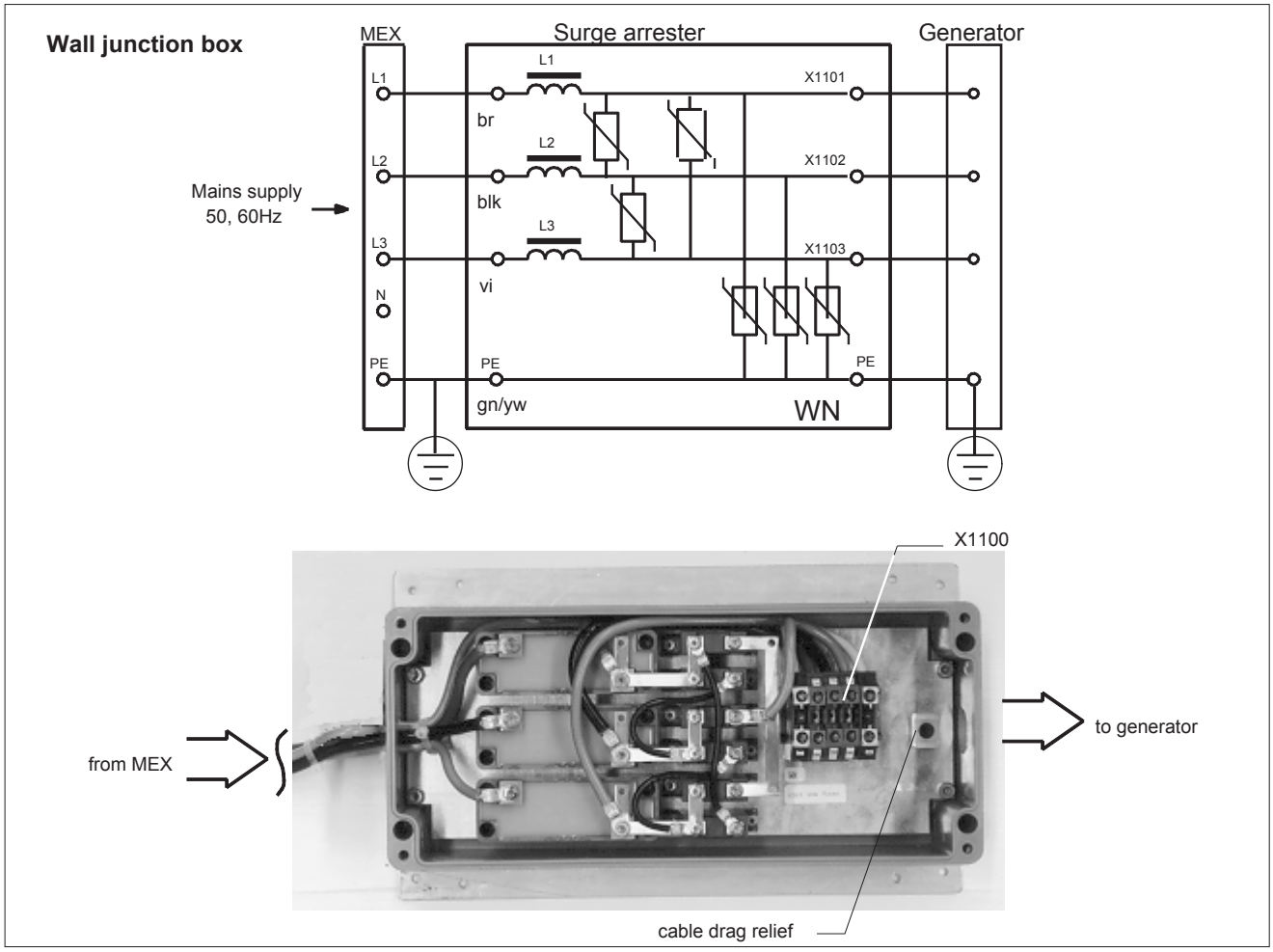
Explanation:

The generators build up the neutral N via their own mains adaptation transformer in the mains assembly and they do not use the neutral N of the hospital mains.

Therefore there is no need to suppress any surges between protective earth PE and neutral N in the surge arrester, just between the three phases and protective earth.

Remark regarding mains input types:

With 5-wire mains the neutral N is **not** fed to the surge arrester and, respectively, the generator.



(Fig. 1)

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1.2 Compatibility

The surge arrester is compatible with:

– OPTIMUS RAD / RF	9890 000 0218x
– OPTIMUS CXA	9890 000 7042x
– Power DISTRIBUTION UNIT	9890 000 0260x
– Basis OPTIMUS C	9890 000 0219x
– Velara	9890 000 0210x

1.3 Mechanical data

See drawing: Z-1 Dimensions

Weight: about 6 kg

1.4 Environmental data

According to PMS standard UXW 13600.

Ambient temperature:	10 ... 40 °C
Relative humidity:	15 ... 90%, no condensation
Relative atmospheric pressure:	70 ... 110 kPa

1.5 Electrical data

Mains voltage:	max. 3 x 480 V + 10%
Mains frequency:	49 ... 61 Hz
Performance:	contiuous 40A peak 500A/sec
Impedance:	R_i = 6mΩ Z_i = 10mΩ at 50Hz per phase Z_i = 12mΩ at 60Hz per phase
Supply configuration:	3 phase, 3 wire power, WYE or DELTA and protective earth (PE) refer also to generator subsystem manual or PRB (planning reference book).

1.6 Scope of delivery

– 1 surge arrester	4512 104 7114x
– 1 set of service documentation	4512 988 00452 REV AA

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2 INSTALLATION

2.1 General

WARNING

Switch OFF the mains supply present at the clinic and make sure that it cannot be switched ON again accidentally.

WARNING

Before starting any work on the generator disconnect the generator from mains and check that it is no longer live.

2.2 Installation and connection of the surge arrester

- Define the installation position of the surge arrester.

It is recommended that it be fitted into the wall junction box or cabinet rear cover (CRC) of the generator.

The following must be taken into account:

– The mains feeder (4 x AWG 7) of the surge arrester is 500 mm long as standard.
– The free length of the mains feeder of the generator is 3 m.

- Unscrew the cover.
- Attach the surge arrester.
- Connect the four wires of the surge arrester to the mains terminal MEX in the wall junction box.

  L1 = brown
  L2 = black
  L3 = violet
  PE = green/yellow

- Connect the mains feeder of the generator to the terminal WNX 1100 of the surge arrester.
- Fit the cover.

The surge arrester has no fuse of its own. For this reason it may only be looped in between the generator and the power–specific line fuse of the generator.

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3 REPLACEMENT

In case it is not possible to repair the surge arrester, replace the complete FRU.

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4 PREVENTIVE MAINTENANCE

The surge arrester does not need any maintenance.

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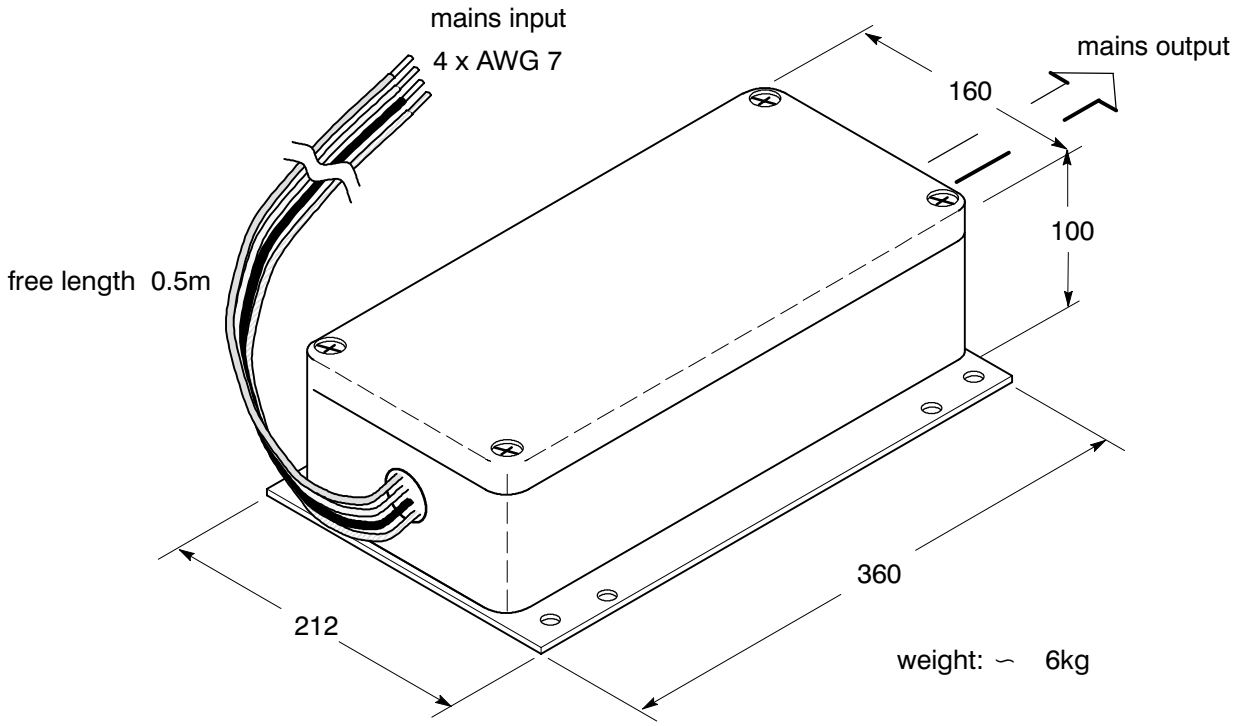
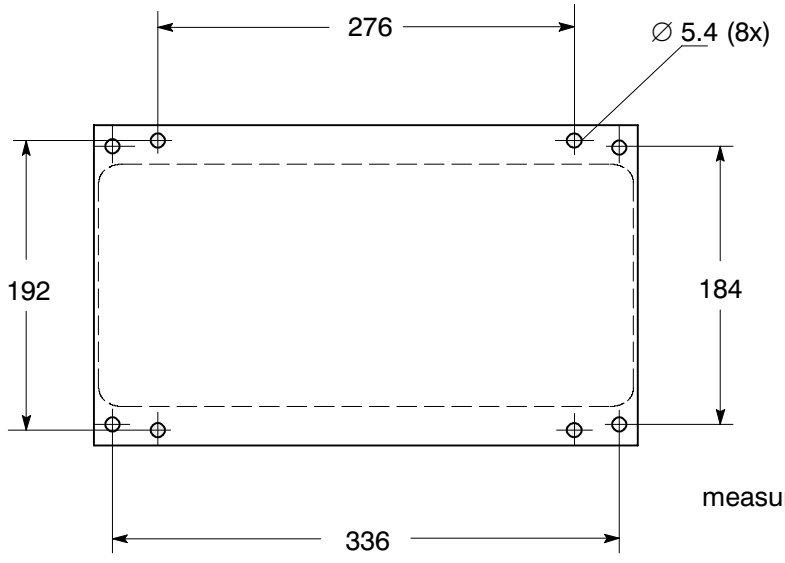


fixing dimension sketch



measures in mm

use shadow mask 184 x 336 or 192 x 276

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Surge Arrester

Mechanical dimensions

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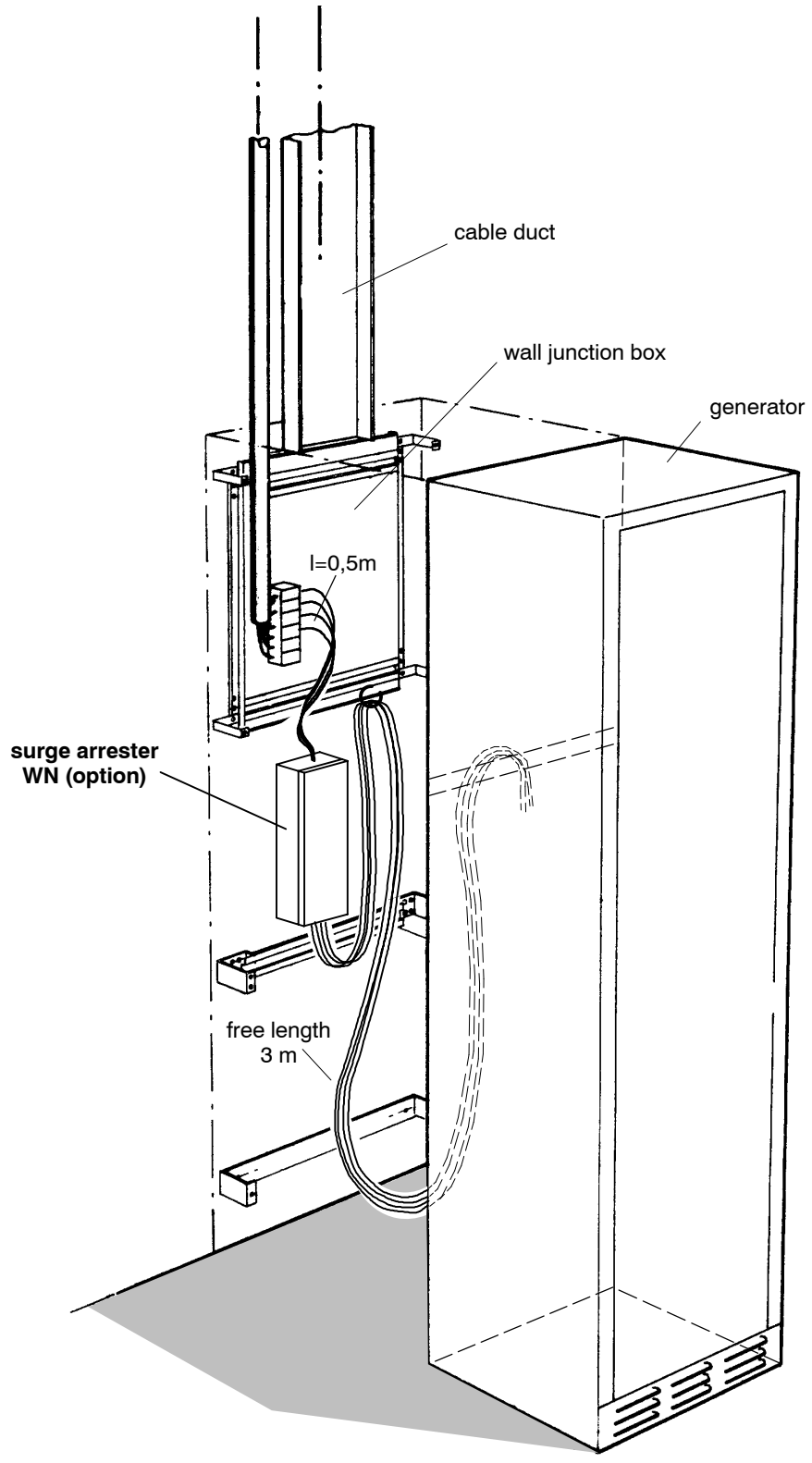

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Surge Arrester_Z2

Installation sample
for OPTIMUS RAD/RF, C, CXA

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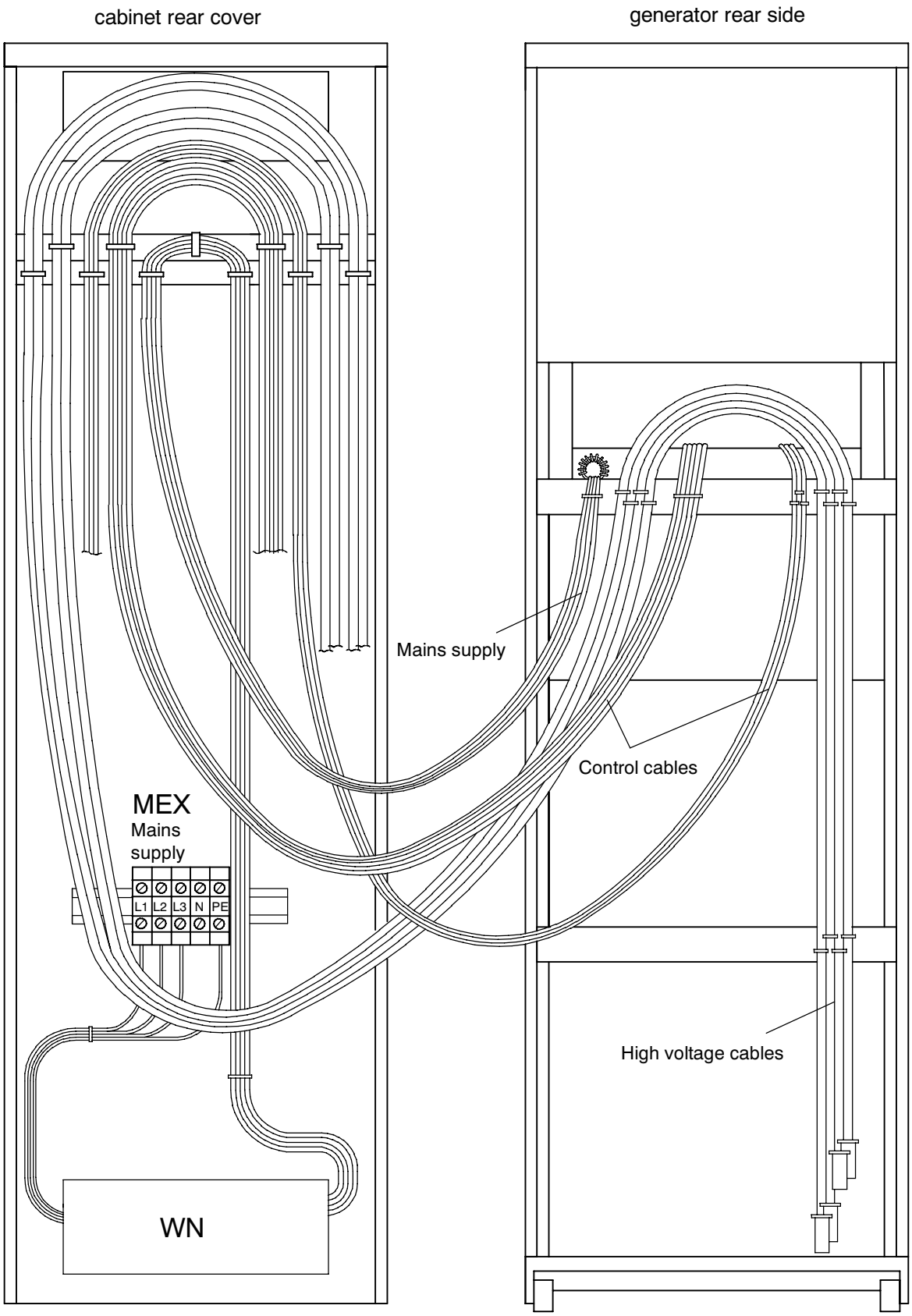

see chapter INSTALLATION
section:
Installing the cabinet rear cover

Installation sample for Velara

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Surge_Arrester_Z3

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